

and 21 as new Claims 37-41. Support for new Claims 37-41 can be found in Claims 13-15, 20, and 21, as originally filed.

Claims 3 and 10 have been amended to depend from Claims 1 and 8, respectively, rather than canceled Claims 2 and 9. Similarly, Claims 16-19 and 22 have been amended to depend from Claim 39, rather than canceled Claim 15. Lastly, Applicants have added new Claims 42-48. Support for new Claims 42 -48 can be found in Claims 6, 7, 13, 14, 16, 20, and 21, as originally filed.

No new matter has been added. Claims 1, 3-8, 10-12, 16-19, and 22-48 are pending in this application.

REMARKS

At the outset, Applicants wish to thank Examiner Mullis for indicating that Claims 6, 7, 13, 14, 16, 20, and 21 are free of the prior art. As the Examiner will note, Applicants have substantially rewritten Claims 6, 13, and 16 in independent form as new Claims 42, 44, and 46. Applicants submit that Claims 42, 44, and 46, and the claims dependent thereon (Claims 43, 45, 47, and 48), are patentable for the same reasons that Claims 6, 13, 16, 20, and 21 were not rejected over the prior art.

Present Claims 1, 3, and 4 relate to certain resin compositions. Present Claims 5-7 relate to certain gasket material and gaskets which contain such a composition, and present Claims 8, 10, and 11 relate to certain thermoplastic elastomer compositions, and present Claims 12, 16-19, and 37-41 relate to certain gasket materials, composite molded bodies, and gaskets which contain such a composition.

The cited references contains no disclosure or suggestion of such compositions, gasket materials, molded composite bodies, or gaskets. Accordingly, these references cannot affect the patentability of the present claims.

The rejection of Claims 1, 2, 5, 8-12, 15, and 17-19 under 35 U.S.C. § 103(a) in view of U.S. Patent No. 5,869,555 (Simmons et al) and the rejection of Claims 1-5, 8-12, 15, and 17-19 under 35 U.S.C. § 103(a) in view of U.S. Patent No. 6,239,217 (Bank et al) in view of U.S. Patent No. 5,384,994 (Borba) are respectfully traversed.

Simmons et al discloses certain polymeric compositions in pellet form which comprise a tacky hot melt composition which can be used either for hot melt pressure sensitive applications or for molded articles. This reference discloses a composition that contains a block copolymer having a molecular weight of greater than 200,00 including Kraton G1651. The high molecular weight grafted block copolymer is used with a lower molecular weight block copolymer. Non-aromatic oils such as paraffinic oils or naphthenic oils may be added (see, column 7 lines 57-59). As conceded by the Examiner on page 4 of the Official Action, Simmons et al discloses no specific examples having a combination of the materials required by the claims of the present invention and no examples of lamination to metals are taught.

In contrast, present Claims 1 and 8, as amended, recite that the weight average molecular weight of (a1) or (a2) is at least 300,000. Moreover, as the Examiner will note, Claims 1 and 8 have also been amended to include the limitations of original Claims 2 and 9, respectively. Accordingly, Applicants submit that the present claims are completely distinct from those of Simmons et al.

Bank et al discloses syndiotactic vinylaromatic polymer compositions containing impact modifiers. This reference discloses a composition containing 5-30 parts of a

polyolefin, 1-10 parts of a block copolymer and 0-25 parts of another block copolymer. The polyolefin may be maleic anhydride and a combination of an aliphatic oil and block copolymer. Kraton G1651, a block copolymer having a styrene content of 32% and a molecular weight of 270,000 is exemplified. As conceded on page 5 of the Official Action, Bank et al does not disclose any examples in which a polyolefin is grafted. Moreover, as also conceded on page 5 of the Official Action, the lamination of the composition to a metal is not disclosed in Bank et al.

However, the main component of Bank et al is 25 to 90 parts by weight of a syndiotactic, vinylaromatic polymer and accordingly, the composition of this reference is completely different from those of the present claims. Namely, in contrast to Bank et al (which provides high temperature resistant syndiotactic vinylaromatic polymer compositions having improved elongation, rigidity, and toughness), the present claims relate to a resin composition that has excellent rubber elasticity, favorable oil maintainability, low hardness and low compression set, and has excellent adhesion to a metal.

Moreover, in further contrast to Bank et al, present Claims 1 and 8, as amended, recite that the weight average molecular weight of (a1) or (a2) is at least 300,000. Furthermore, present Claims 1 and 8 have also been amended by adding the limitations of original Claims 2 and 9. In view of these amendments, Applicants submit that the present claims are completely distinct from the teachings of Bank et al.

Applicants submit that there is nothing in Borba which can cure the basic deficiencies of Bank et al. Specifically, contrary to the assertion in the Official Action, there is nothing in either Borba or Bank et al which would have suggested to a practitioner having ordinary skill in the art at the time of the invention to graft the polyolefin of Bank et al to a metal as taught by Borba.

In this regard, Borba relates to building construction technology and systems.

Although Borba discloses that metal may be laminated to a polystyrene containing composition in order to confer fire resistance, it relates to completely different technology from the present invention. That is, the present invention relates to resin compositions that have excellent rubber elasticity, favorable oil maintainability, low hardness and low compression set, has excellent adhesion to a metal, and is well suited as a gasket, material for use in a gasket integrated with a metal wherein a gasket is integrated into a metallic frame body as described in the specification of the present invention. Mere knowledge about fire resistance of a material to be used for an energy payback building does not indicate the solution for the foregoing versatile aims of the present invention. Thus, Borba neither teaches nor suggests the integrated molding of the metal with a thermoplastic elastomer composition, as in the present claims.

For all of these reasons, the present claims are not obvious in view of Simmons et al or Bank et al even in view of Borba.

Moreover, in regard to all of the cited references, it must be noted that the specific features of (b1) and (b2), the non-aromatic rubber softening agent recited, in present Claims 1 and 8, are not inherent in general non-aromatic rubber softening agents but must be selected as explained at page 15, lines 5 to 17, and at page 26, lines 4 to 6, of the present specification. In addition, the specific features of (c1), the modified polyolefinic resin, recited in amended Claim 1 are not inherent in general modified polyolefinic resin but must be selected as explained at page 17, line 5, to page 19, line 8, of the present specification. Also, the specific features of (c2), the modified hydrogenated block copolymer, recited in present Claim 8 are not inherent in general modified hydrogenated block copolymer but must be selected as explained at page 26, line 17, to page 28, line 16, of the specification. None of the

foregoing features are described or suggested in any of the cited prior art references. Furthermore the hardness and the excellent compression set properties afforded by the presently claimed composition confirm the unobvious nature of the present claims.

Accordingly, the rejections are improper and should be withdrawn.

The rejection of Claim 14 under 35 U.S.C. § 101 and the rejection of Claims 13, 14, 20, and 21 under 35 U.S.C. § 112, second paragraph, have been obviated by appropriate amendment. As the Examiner will note, Applicants have amend the claims such that they are free of the criticisms outlined in the paragraphs bridging pages 2 and 3 of the Official Action. Accordingly, the rejections should be withdrawn.

Applicants submit that the application is now in condition for allowance, and early notification of such action is earnestly solicited.

Respectfully submitted,

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A handwritten signature in black ink, appearing to read 'Stephen G. Baxter', with a stylized, flowing script.

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IN THE CLAIMS

Please cancel Claims 2, 9, 13-15, 20, and 21, without prejudice toward the further prosecution of these claims in a continuation and/or divisional application.

Please amend the claims as shown on the attached marked-up copy to read as follows:

--1. (Amended) A resin composition which comprises a thermoplastic elastomer composition comprising 100 parts by weight of a (a1) hydrogenated block copolymer which is obtained by hydrogenating a block copolymer consisting essentially of at least one polymer block composed principally of a vinyl aromatic compound and at least one polymer block composed principally of a conjugated diene compound, which has a weight average molecular weight of at least [200,000] 300,000, in which the at least one polymer block composed principally of a vinyl aromatic compound is polystyrene, and in which the content by weight of the polystyrene moiety that is contained in the hydrogenated block copolymer is in the range of 20 to 40 %; 100 to 200 parts by weight of a (b1) non-aromatic rubber softening agent having a kinematic viscosity at 40°C of at least 300 mm²s⁻¹ and 10 to 50 parts by weight of a (c1) modified polyolefinic resin, said resin composition having a hardness as measured in accordance with JIS K6253 with durometer of type A being at most 50 degrees and a compression set as measured in accordance with JIS K6262 after being allowed to stand at 70 °C under a compression ratio of 25% for 22 hours being at most 50%, wherein the (c1)

modified polyolefinic resin is that which has a functional group having an absorption band at a wave number in the range of 1500 to 2000 cm⁻¹ in the infrared absorption spectrum thereof.

3. (Amended) The resin composition according to Claim [2] 1, wherein the (c1) modified polyolefinic resin is a resin which is produced by modifying a polyolefinic resin composed principally of polypropylene with an unsaturated carboxylic acid or a derivative thereof.

8. (Amended) A thermoplastic elastomer composition comprising 100 parts by weight of a (a2) hydrogenated block copolymer which is obtained by hydrogenating a block copolymer consisting essentially of at least one polymer block composed principally of a vinyl aromatic compound and at least one polymer block composed principally of a conjugated diene compound, which has a weight average molecular weight of at least [200,000] 300,000, in which the at least one polymer block composed principally of a vinyl aromatic compound is polystyrene and in which the content by weight of the polystyrene moiety that is contained in the hydrogenated block copolymer is in the range of 20 to 40 %; 100 to 200 parts by weight of a (b2) non-aromatic rubber softening agent having a kinematic viscosity at 40 °C of at least 300 mm²s⁻¹; and 10 to 50 parts by weight of a (c2) modified hydrogenated block copolymer obtained by hydrogenating a block copolymer in which a functional group is imparted to a block copolymer consisting essentially of at least one polymer block composed principally of a vinyl aromatic compound and at least one polymer block composed principally of a conjugated diene compound; and 0 to 20 parts by weight of a (d2) compound composed principally of a crystalline polyolefin, said thermoplastic elastomer composition having a hardness as measured in accordance with JIS K6253 with durometer of type A being at most 50 degrees and a compression set as measured in accordance with JIS

K6262 after being allowed to stand at 70 °C under a compression ratio of 25% for 22 hours being at most 50%,

wherein the (c2) modified hydrogenated block copolymer is that which has a functional group having an absorption band at a wave number in the ranged of 1500 to 2000 cm^{-1} in the infrared absorption spectrum thereof.

10. (Amended) The thermoplastic elastomer composition according to Claim [9] 8, wherein the (c2) modified hydrogenated block copolymer is that which is modified with an unsaturated carboxylic acid or a derivative thereof.

16. (Amended) The composite molded body according to Claim [15] 39, wherein the thermoplastic resin is at least one species selected from the group consisting of polyethylene, polypropylene and polystyrene.

17. (Amended) The composite molded body according to Claim [15] 39, wherein the thermoplastic resin laminate has a thickness of at most 100 μm .

18. (Amended) The composite molded body according to Claim [15] 39, wherein the thermoplastic elastomer composition comprises at least one species selected from the group consisting of styrenic thermoplastic elastomers, olefinic thermoplastic elastomers and urethanic thermoplastic elastomers.

19. (Amended) The composite molded body according to Claim [15] 39, wherein the thermoplastic elastomer composition comprises 100 parts by weight of a (a3) hydrogenated block copolymer which is obtained by hydrogenating a block copolymer consisting essentially of polystyrene block and at least one polymer block composed principally of a conjugated diene compound, in which the content by weight of the polystyrene moiety that is contained in the hydrogenated block copolymer is in the range of 20 to 40%; 100 to 500 parts by weight

of a (b3) non-aromatic softening agent having a kinematic viscosity at 40 °C of at least 300 mm²s⁻¹; and 5 to 100 parts by weight of a (c3) polyolefinic hydrocarbon resin.

22. (Amended) A process for producing the composite molded body as set forth in Claim [15] 39, comprising placing a metallic sheet which has a prescribed shape and which is laminated on at least one side thereof with a thermoplastic resin, and injection molding a thermoplastic elastomer composition onto at least one part of the surface laminated therewith to integrate the metallic sheet and the thermoplastic elastomer composition.--

Please add the following new claims:

--37. (New) to 48. (New)--